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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,976	12/31/2001	Jussi Ruutu	1120.41059X00	5432
20457	7590	08/16/2005	EXAMINER	
ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-3873			TRAN, PHUC H	
			ART UNIT	PAPER NUMBER
			2666	

DATE MAILED: 08/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/029,976

Applicant(s)

RUUTU ET AL.

Examiner

PHUC H. TRAN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 13-15, 27-31, 34-39 and 43 is/are rejected.
- 7) ☒ Claim(s) 10-12, 16-26, 32, 33, 40-42 and 44 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claims 11 and 33 are objected to because of the following informalities: the term "PDCP" need to spell out. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-5, 27-29, and 37-38 are rejected under 35 U.S.C. 102(e) as being anticipated by Putcha et al. (U.S. Patent No. 6822966 B2).

- With respect to claims 1, & 27, Putcha teaches a method of controlling a data packet flow in a buffer means of a network node of a data network (e.g. the method for dynamically managing buffer units assigned to sub-pools of a network), said method comprising the steps of:

(a) assigning a nominal capacity to each data flow (col. 5, lines 8-24); and

(b) shifting free capacity from a first flow portion to a second flow portion, when a new data packet of said second flow portion has been received at said buffer means and said nominal capacity has been exceeded (col. 5, lines 30-45).

- With respect to claims 2, and 28, Putcha teaches wherein said nominal capacity is an upper buffer memory limit of a buffer memory of said buffer means shared between a plurality

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of channels allocated to respective packet data connections (e.g. the method for dynamically managing buffer units assigned to sub-pools of a network) and determined in dependence on the number of allocated channels (col. 5, lines 8-24), and wherein memory space is shifted from said first channel to a second channel, when a new data packet of said second channel has been received and not enough memory space is available for said second channel (col. 5, lines 30-45).

- With respect to claims 3, and 29, Putcha also teaches wherein said upper buffer memory limit is determined by dividing the total buffer memory capacity by the number of allocated channels (col. 4, lines 24-33).

- With respect to claims 4, & 37, Putcha explicitly teach wherein said second channel is a new channel set up for a new packet data connection (e.g. design choice).

- With respect to claims 5, & 38, Putcha explicitly teach wherein said second channel is a channel having reached its upper buffer memory limit (e.g. design choice).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6-9, 13-15, 30, 31, 34-36, 39, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Putcha et al. (U.S. Patent No. 6822966 B2) in view of Lu et al. (U.S. Patent No. 6473815 B2).

- With respect to claims 6, 8, 30, 31, 39, and 43, Putcha discloses all the aspect of the claimed invention as set forth above but fails to teach wherein a predetermined data packet is dropped from the queue of said first channel, when no free memory is available in said buffer memory. Lu teaches that dropping the data packet when no free memory is available (see col. 7, lines 37-43). The method of dropping the data packet can be implemented in the control of Putcha's invention. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to implement the method of dropping for protecting an overflow in the queues system.

- With respect to claim 7, Putcha teaches wherein said predetermined data packet is located at the front at the front of queue of the first channel (col. 4, lines 43-50).

- With respect to claim 9, Putcha also teaches wherein said channel with the longest packet queue is determined by an estimation (col. 1, lines 41-47).

- With respect to claim 13, Putcha teaches wherein said nominal capacity is a nominal flow rate at which data flow traffic is guaranteed (col. 7, lines 55-67).

- With respect to claim 14, Putcha discloses wherein said free capacity is a residual rate corresponding to the difference between said nominal flow rate and an instantaneous traffic rate of said first flow portion (e.g. the borrowing buffer from difference sup-pools).

- With respect to claim 15, Putcha further comprises the step of admitting a new data flow only if the nominal flow rate of said new data flow falls within the remaining system bandwidth (e.g. the UBR, ABR in the invention).

- With respect to claim 34, Putcha also teaches wherein said flow control means comprises scheduling means and said nominal capacity is a nominal flow rate at which data flow traffic is guaranteed in a QOS scheduling algorithm (col. 5, lines 30-35).

- With respect to claim 35, Putcha teaches wherein said scheduling means comprises said buffer means (col. 7, lines 5-9).

- With respect to claim 36, Putcha discloses wherein said network node is a radio network controller (col. 1, lines 15-25).

Allowable Subject Matter

6. Claims 10-12, 16-26, 32-33, 40-42 and 44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Augusta et al. (U.S. Patent No. 6317427 B1) discloses method and apparatus for adaptive port buffering.

- Kojima (U.S. Patent No. 6741570 B1) discloses cell buffer use rate monitoring method and system.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHUC H. TRAN whose telephone number is (571) 272-3172. The examiner can normally be reached on M-F (8-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, RAO SEEMA can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phuc Tran
Assistant Examiner
Art Unit 2664

P.t
8/9/05



DANG TRAN
PRINCIPAL EXAMINER